Functions used in SNBs and firing rule

Now you know:

- the basic underlying features of SNBs
- that SNBs capture bags of values
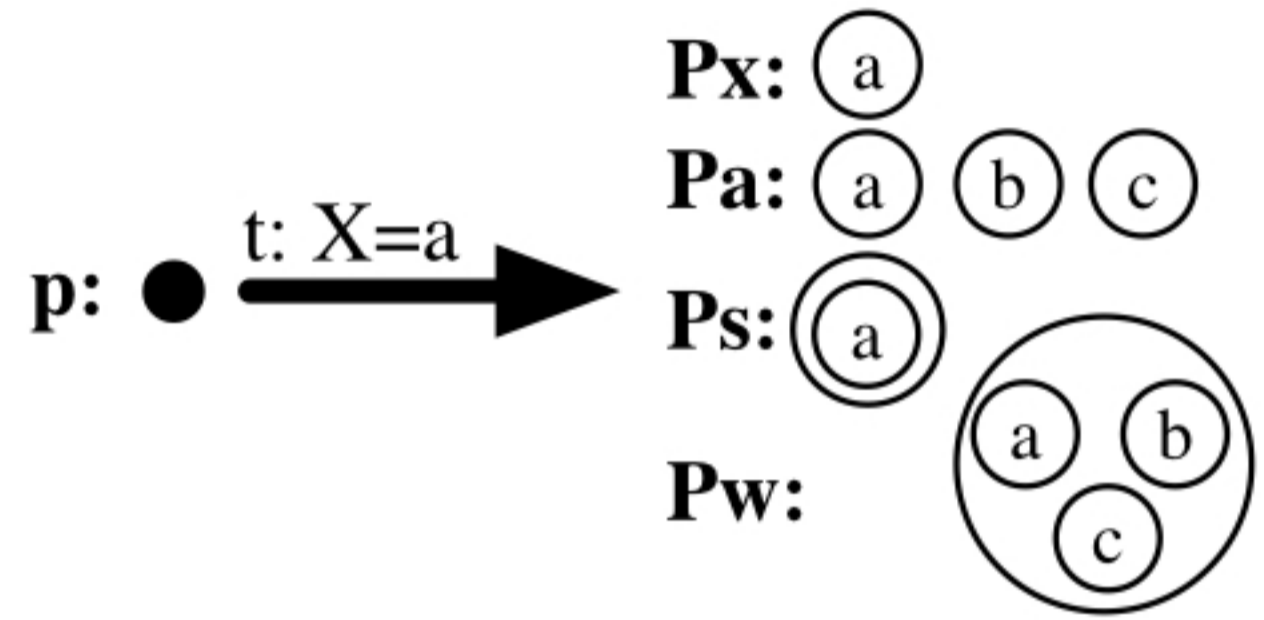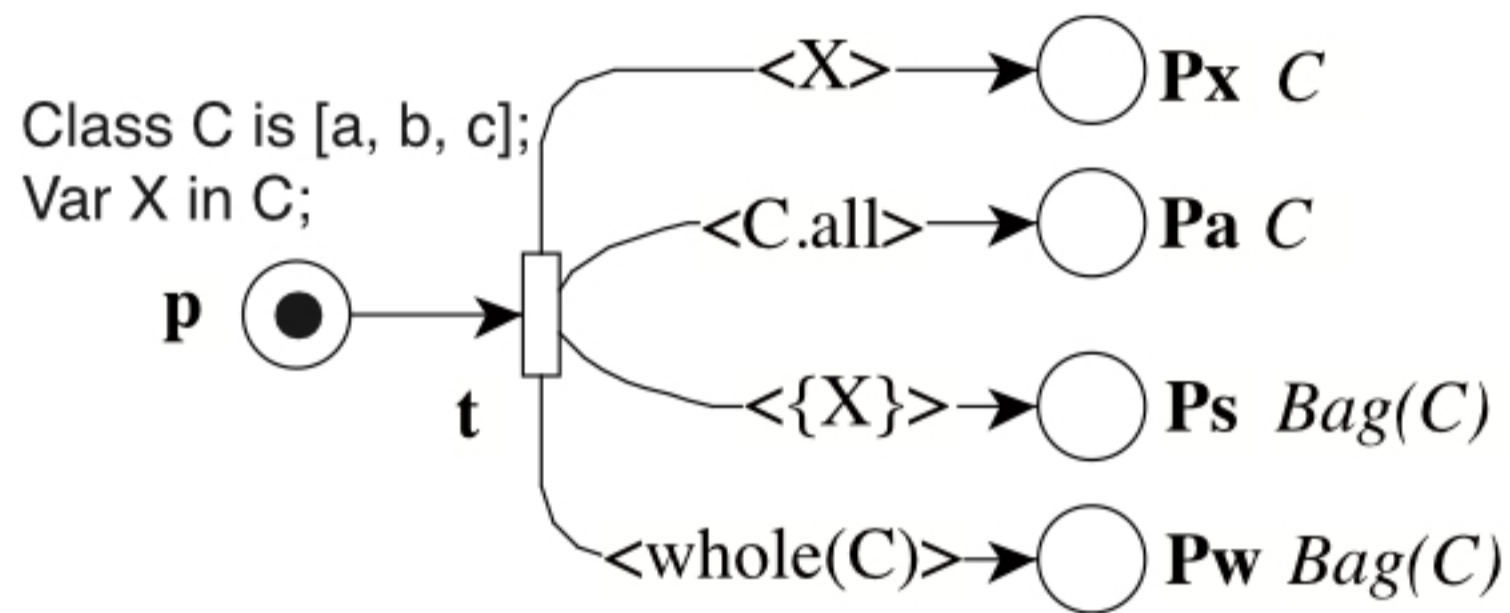
Introduction

Now you know:

- the basic underlying features of SNBs
- that SNBs capture bags of values

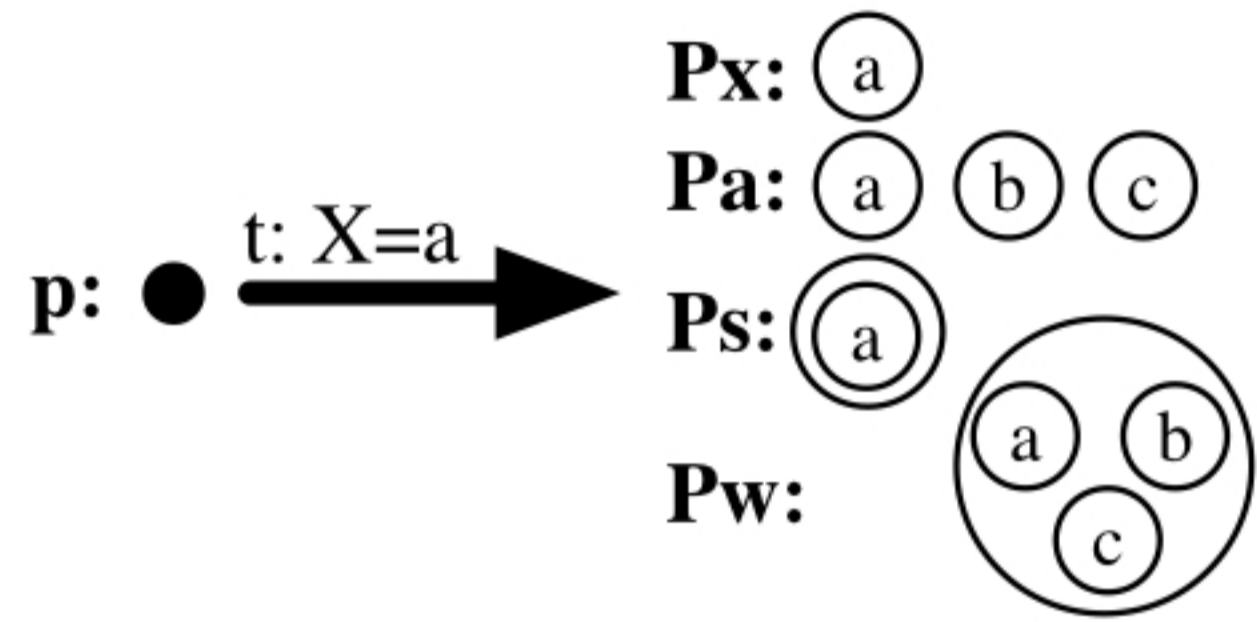**Let's present the functions manipulated in SNBs and the firing rule**

Basic functions (colors and Bags)
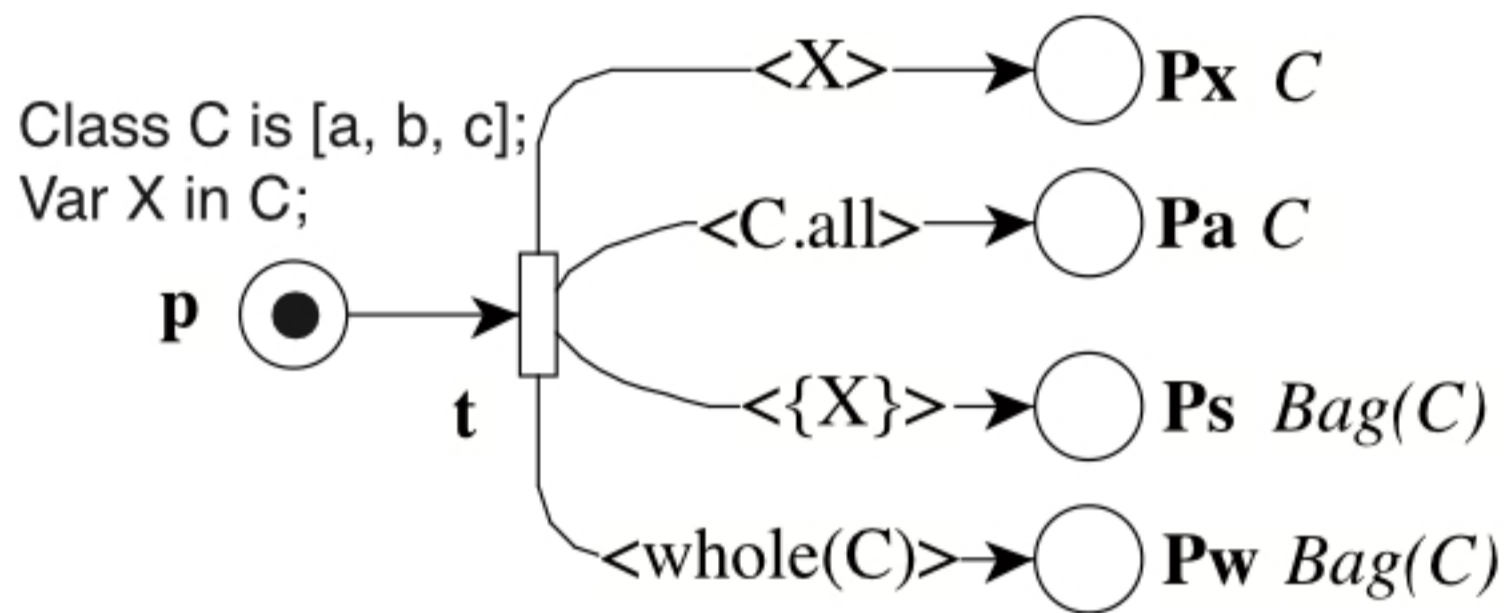
Class C is [a, b, c];
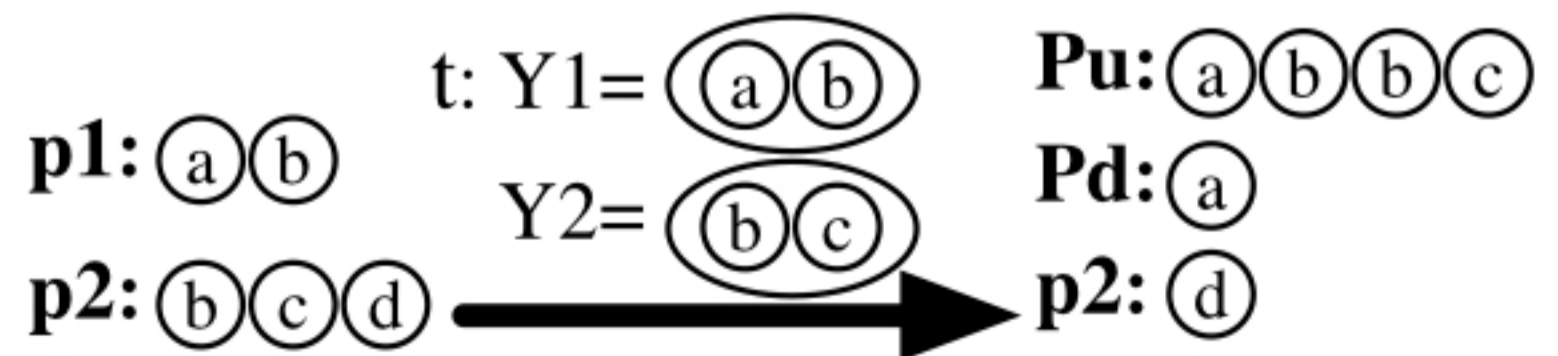Var X in C;

p ●

t

<X> → ◯ **Px** *C*

<C.all> → ◯ **Pa** *C*

<{X}> → ◯ **Ps** *Bag(C)*

<whole(C)> → ◯ **Pw** *Bag(C)*

p: ● —t: X=a→

Px: (a)

Pa: (a) (b) (c)

Ps: ((a))

Pw: ((a) (b) (c))

Basic functions (colors and Bags)

Class C is [a, b, c];
Var X in C;

p ●

t

`<X>` → Px C
`<C.all>` → Pa C
`<{X}>` → Ps Bag(C)
`<whole(C)>` → Pw Bag(C)

p: ●   t: X=a →

Px: ⓐ
Pa: ⓐ ⓑ ⓒ
Ps: ⓐ
Pw: (ⓐ ⓑ ⓒ)

Bag manipulations

Class C is [a, b, c, d];   Var Y1, Y2 in Bag(C);

p1 C (ⓐ ⓑ) `<Y1>`
p2 C (ⓑ ⓓ ⓒ) `<Y2>` t

`<Y1 ∪ Y2>` → Pu C
`<Y1\Y2>` → Pd C

p1: ⓐ ⓑ
p2: ⓑ ⓒ ⓓ

t: Y1= (ⓐ ⓑ)
Y2= (ⓑ ⓒ) →

Pu: ⓐ ⓑ ⓑ ⓒ
Pd: ⓐ
p2: ⓓ

Unique Y : true iff elements appear at most once in Y

card(Y) : the cardinatlity of bag Y

ord(x) : the rank of element x in an ordered set

Conclusion

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- you know the additional functions used in guards

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Let's present a more complete example (next sequence)